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Applicants	:	Jogesh WARRIOR et al.
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Title: METHOD OF OPERATING SENSOR NET AND SENSOR APPARATUS

APPEAL BRIEF

U.S. Patent and Trademark Office
Customer Window, Mail Stop **Appeal Brief - Patents**
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Sir:

In response to the FINAL Office Action dated 28 January 2008 and the Advisory Action dated 15 April 2008, finally rejecting pending claims 1-28, and in support of the Notice of Appeal filed on 25 April 2008, Applicants hereby respectfully submit this Appeal Brief.

REAL PARTY IN INTEREST

Agilent Technologies, Inc. owns all of the rights in the above-identified U.S. patent application by virtue of an assignment recorded at Reel 017732, Frame 0088.

RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences related to this application or to any related application, nor will the disposition of this case affect, or be affected by, any

other application directly or indirectly.

STATUS OF CLAIMS

Claims 1-28 are pending and all stand rejected.

Accordingly, the claims on Appeal are claims 1-28.

STATUS OF AMENDMENTS

There are no pending amendments with respect to this application.

SUMMARY OF CLAIMED SUBJECT MATTER

The present invention is directed to a method of operating a sensor net, and a sensor device for operation in a sensor net.[1]

Accordingly, as broadly recited in claim 1, a method (FIG. 8 – element 800; paragraph [0036], lines 1-2) of operating a sensor net (FIG. 4 – element 400; paragraph [0019], lines 1-3), comprises: detecting access attempts (FIG. 8 – element 801; paragraph [0036], lines 2-3) by one or several mobile devices (FIG. 4 – element 403; paragraph [0020], lines 1-2) to multiple nodes (FIG. 4 – element 402) within the sensor net; calculating a respective probability of future access (FIG. 8 – element 804; paragraph [0036], lines 5-6) by a mobile device for each of the multiple nodes in response to the detecting; communicating information related to the calculated probabilities (FIG. 8 – elements 805-807; paragraph [0037]) through the sensor net; and routing measurement data for collection (FIG. 8 – element 814; paragraph [0038], lines 9-11) to respective ones of the multiple nodes utilizing the calculated probabilities.

As broadly recited in claim 2, the method further features receiving probabilities of future access (FIG. 8 – element 805; paragraph [0037], lines 1-2) from a mobile device by least one node of the sensor net and communicating the

1 In the description to follow, citations to various reference numerals, figures, and corresponding text in the specification are provided solely to comply with Patent Office rules. It should be understood that these reference numerals, figures, and text are exemplary in nature, and not in any way limiting of the true scope of the claims. It would therefore be improper to import anything into any of the claims simply on the basis of **exemplary** language that is provided here only under the obligation to satisfy Patent Office rules for maintaining an Appeal.

received probabilities (FIG. 8 – element 807; paragraph [0037], lines 4-5) through the sensor net , wherein the routing further utilizes the received probabilities to route measurement data (FIG. 8 – element 813; paragraph [0038], lines 7-8).

As broadly recited in claim 5, calculating a respective probability of future access by a mobile device for each of the multiple node comprises calculating a time window average of detected access attempts (FIG. 8 – element 802; paragraph [0036], lines 3-5).

As broadly recited in claim 7, the method further features receiving a first portion of the information at a first node in the sensor net (FIG. 8 – element 805; paragraph [0037], lines 1-2); selecting a second portion from the first portion of information utilizing calculated probabilities of future access (FIG. 8 – element 806; paragraph [0037], lines 2-4); and transmitting the second portion from the first node to a second node in the sensor net, wherein the selecting removes information from the first portion utilizing a cost function (FIG. 8 – element 807; paragraphs [0033] lines 9-11 and [0037], lines 4-5).

As broadly recited in claim 8, the cost function calculates a path cost to a collection point (paragraph [0028], lines 8-11).

As broadly recited in claim 9, the cost function is a function of communication hops to a collection point (paragraphs [0028], lines 3-6 & 8-11 and [0029], lines 8-10).

As broadly recited in claim 12, the method further features selecting multiple destination collection points (FIG. 8 – elements 809-813; paragraph [0038], lines 3-8) utilizing the communicated information, wherein selecting multiple destination collection points comprises: calculating a group probability of access to at least one of the multiple destination collection points (FIG. 8 – element 811; paragraph [0038], lines 5-6); and comparing the calculated group probability of access to a threshold value (FIG. 8 – element 805; paragraph [0033], lines 8-9).

As broadly recited in claim 13, the routing measurement data for collection comprises utilizing a pseudo-random algorithm (FIG. 8 – element 813; paragraph [0038], lines 7-9) to distribute measurement data beyond optimal paths identified utilizing the communicated information related to the calculated probabilities of future access by a mobile device for each of the multiple nodes.

As broadly recited in claim 16, a sensor device (FIG. 4, element 402; FIG. 9 – element 900 – paragraph [0039], lines 1-2) for operation in a sensor net (FIG. 4 – element 400; paragraph [0019], lines 1-3) comprises: means for detecting and recording attempts (FIG. 9 – element 903; paragraph [0040], lines 2-4) to access measurement data (FIG. 9 – element 905; paragraph [0030], line 6) by mobile devices (FIG. 4 – element 403; paragraph [0020], lines 1-2); means for calculating a probability (FIG. 9 – element 903; paragraph [0040], lines 4-5) of future access by a mobile device to the sensor device utilizing the recorded access attempts; means for receiving information (FIG. 9 – element 902; paragraph [0039], lines 2-4) related to probabilities of future access associated with other sensor devices within the sensor net; means for communicating information (FIG. 9 – elements 902 & 903; paragraphs [0039], lines 2-4 and [0040], lines 5-7) related to probabilities of future access to other sensor devices; and means for routing measurement data (FIG. 9 – elements 903 & 908; paragraph [0040], lines 7-8) within the sensor net in response to the means for calculating and the means for receiving.

As broadly recited in claim 17, the sensor device includes means for receiving probabilities of future access from a mobile device (FIG. 9 – element 902; paragraph [0039], lines 2-4), wherein the means for routing further operates in response to the means for receiving probabilities from a mobile device (paragraph [0022], lines 10-12).

As broadly recited in claim 18, probabilities of access are correlated to a time of day (paragraph [0036], lines 6-7).

As broadly recited in claim 20, the means for communicating selects the subset of sensor devices in relation to respective probabilities of access to the subset of sensor devices and a cost function (FIG. 8 – element 813 – paragraph [0038], lines 7-8).

As broadly recited in claim 24, the means for routing includes randomization logic for directing measurement data beyond optimal paths defined by probabilities of future access to other sensor devices (paragraph [0038], lines 7-9).

As broadly recited in claim 25, a method (FIG. 8 – element 800; paragraph [0036], lines 1-2) of operating a sensor net (FIG. 4 – element 400; paragraph [0019],

lines 1-3) comprises: detecting access attempts (FIG. 8 – element 801; paragraph [0036], lines 2-3) by one or several mobile devices (FIG. 4 – element 403; paragraph [0020], lines 1-2) to multiple nodes (FIG. 4 – element 402) within the sensor net; determining probabilities of future access (FIG. 8 – element 804; paragraph [0036], lines 5-6) by the mobile devices to nodes of the sensor net; distributing information related to the determined probabilities through the sensor net (FIG. 8 – elements 805-807; paragraph [0037]); and routing measurement data utilizing the distributed information related to the determined probabilities (FIG. 8 – element 814; paragraph [0038], lines 9-11).

As broadly recited in claim 26, determining probabilities comprises calculating time window averages of access attempts by mobile devices to respective nodes of the sensor net (FIG. 8 – element 802; paragraph [0036], lines 3-5).

As broadly recited in claim 27, the method further features receiving information from a mobile device related to future access activity of mobile devices (FIG. 8 – element 803; paragraph [0036], lines 3-5).

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection to be reviewed on Appeal are: (1) the rejections of claims 1-3, 6-17, 19-25, 27 and 28 under 35 U.S.C. § 102 over Sorokine et al. U.S. Patent 6,430,414 ("Sorokine"); and (2) the rejections of claims 4, 5, 18 and 26 under 35 U.S.C. § 103 over Sorokine in view of Raith U.S. Patent 6,711,408 ("Raith").

ARGUMENTS

(1) Claims 1-3, 6-17, 19-25, 27 and 28 Are All Patentable Over Sorokine

Claim 1

Among other things, the method of claim 1 includes calculating a respective probability of future access by a mobile device for each of a plurality of nodes in a sensor net in response to detected access attempts by one or several mobile devices to the plurality of nodes, and then communicating information related to these calculated probabilities through the sensor net.

Applicants respectfully submit that Sorokine does not disclose any method

including such features.

The Examiner cites col. 10, lines 58-62 as supposedly disclosing "*calculating a respective probability of future access by a mobile device*" and then cites a completely different text at col. 7, lines 15-18 as supposedly disclosing "*for each of the multiple nodes in response to said detecting*."

Here is the text at col. 10, lines 58-62:

> In another embodiment of the invention, the BSC **31** prioritizes the ENL using the results of a channel prediction process so that the MS **10** can concentrate its searcher power on pilots with a higher likelihood to be the handoff candidate.

And here is the text at col. 7, lines 15-18:

> loop for forward traffic channel power control. The outer power control loop estimates a setpoint value based on Eb/Nt to achieve a target frame error rate ("FER") on each assigned forward traffic channel. These setpoints are com-

The first portion of text merely discloses that a base station controller (BSC) can prioritize an effective neighbor list (ENL) using a channel predictive process so that a mobile station can concentrate on pilots which are more likely to be a good candidate for a soft handoff. The second portion of text discloses that a mobile station (MS) can estimate a setpoint value for a base station to achieve a target frame error rate through a forward traffic channel.

There is no mention in the two portions of text reproduced above of calculating any **<u>probability of any mobile device accessing any nodes</u>**. Instead, the cited text discloses that a BSC creates an ENL that includes those BS that are likely to be **<u>a good candidate for a successful soft handoff</u>** – which may or may not ever even occur – at a particular instant in time. This certainly cannot in any way be equated to calculating a probability that any MS will actually ever access a particular BS.

Indeed, there is nothing in Sorokine which even remotely suggests trying to determine a probability that a MS will ever actually attempt to access any particular BS - nor is Sorokine concerned in the least with such probabilities. All that Sorokine is concerned with is trying to determine which BS are available at any given time for communication with a MS via a handoff procedure.

Furthermore, in the method of claim 1, the probabilities are calculated in response to detected access attempts by one or several mobile devices to the plurality of nodes.

In stark contrast, the “likelihood” that a BS could be a good handoff candidate for a particular MS (because it is likely to have a good signal strength with the MS) that is mentioned at col. 10, lines 58-62 is calculated based on channel predictive models, and not in response to detected access attempts by one or several mobile devices to the plurality of nodes.

Additionally, the method of claim 1 includes communicating information related to these calculated probabilities through the sensor net.

The Examiner states that Sorokine discloses this at col. 7, lines 18-20.

Here is the text of Sorokine at col. 7, lines 18-20:

> assigned forward traffic channel. These setpoints are communicated to the BS either implicitely or through signal messages. The differences between these set points helps the

Here the text plainly refers to setpoints calculated by a MS being communicated from the MS to a BS. These setpoints correspond to signal strengths (E_B/N_O) that are required to achieve a desired packet error rate for the MS. The **setpoints are not information related to any calculated probabilities**, and more specifically are not related to any probabilities that a mobile device will access a particular node of a sensor net. Furthermore, the setpoint calculated by the MS is not the “likelihood” that is mentioned at col. 10, lines 58-62, which was previously cited as supposedly corresponding to the recited probability.

So Applicants respectfully submit that there is no way to twist and contort the

teachings of <u>Sorokine</u> to somehow try to get them to read on the method of claim 1 and still include all of the features recited therein.

Finally, the method of claim 1 also includes **<u>routing measurement data for collection</u>** to respective ones of the multiple nodes **<u>utilizing the calculated probabilities</u>**.

The Examiner cites col. 1, lines 32-35 as supposedly disclosing this feature. Here is the text at col. 1, lines 32-35:

> One particularly important feature of CDMA systems for effective third generation wireless communication is the soft handoff, which allows the MS to move smoothly from the coverage of one cell to another without interruption. The soft

The cited text does not mention any measurement data. The cited text does not mention routing of any measurement data to any node for collection. The cited text does not mention that any measurement data is routed using any calculated probabilities that a mobile device will access various nodes.

Accordingly, for at least these reasons, Applicants respectfully submit that claim 1 is clearly patentable over <u>Sorokine</u>.

<u>Claims 2-3 and 6-15</u>

Claims 2-3 and 6-15 all depend from claim 1 and are deemed patentable for at least the reason set forth above with respect to claim 1, and for the following additional reasons.

<u>Claim 2</u>

Among other things, the method of claim 2 includes receiving probabilities of future access from a mobile device by least one node of said sensor net and communicating said received probabilities through said sensor net.

Applicants respectfully submit that the cited text at col. 7, lines 9-22 discloses communicating set points from a MS to a BS.

The cited text clearly does not disclose communicating any received probabilities through any sensor net, or using any such probabilities to route any

measurement data through a sensor net.

Applicants respectfully requested the Examiner to cite something in Sorokine which actually discloses these features, or else withdraw the rejection of claim 2.

In response, in the Advisory Action dated 15 April 2008, the Examiner cited col. 9, lines 32-49, and stated that a BSC generates a prioritized neighbor list which is sent to a base station.

A list of neighboring base stations is clearly not a list of probabilities.

Accordingly, Applicants respectfully submit that claim 2 is clearly patentable over Sorokine.

Claim 7

Among other things, the method of claim 7 includes receiving a first portion of the information at a first node in the sensor net; selecting a second portion from the first portion of information utilizing calculated probabilities of future access; and transmitting the second portion from the first node to a second node in the sensor net, wherein the selecting removes information from the first portion utilizing a cost function.

The Examiner cites col. 8, lines 31-44.

The cited text clearly makes no mention of selecting a second portion of information from the first portion of information, or transmitting the second portion from the first node to a second node, or utilizing a cost function for such a selection.

Accordingly, Applicants respectfully submit that claim 7 is clearly patentable over Sorokine.

Claim 8

Among other things, in the method of claim 8 the cost function calculates a path cost to a collection point.

The Examiner again cites col. 8, lines 31-44.

The cited text clearly makes no mention of any path costs. Of course no such path costs even exist in Sorokine, because Sorokine does not even pertain to a scatter net or other network topology where data is relayed from node to node to node – instead Sorokine pertains to a conventional hierarchical mobile communication network where a MS communicates with a BS which in turn

communicates with a BSC, etc.

Accordingly, Applicants respectfully submit that claim 8 is clearly patentable over Sorokine.

Claim 9

Among other things, in the method of claim 9 the cost function is a function of communication hops to a collection point.

The Examiner again cites col. 8, lines 31-44.

The cited text clearly makes no mention of any communication hops. Of course no such communication hops even exist in Sorokine, because Sorokine does not even pertain to a scatter net or other network topology where data is relayed from node to node to node – instead Sorokine pertains to a conventional hierarchical mobile communication network where a MS communicates with a BS which in turn communicates with a BSC, etc.

Accordingly, Applicants respectfully submit that claim 9 is clearly patentable over Sorokine.

Claim 12

Among other things, in the method of claim 12 includes selecting multiple destination collection points by (1) calculating a group probability of access to at least one of the multiple destination collection points; and (2) comparing the calculated group probability of access to a threshold value.

The Examiner states that Sorokine discloses calculating a group probability of access to at least one of the multiple destination collection points at col. 8, line 60 – col. 9, line 4.

The cited text clearly makes no mention or suggestion of calculating any group probability – never mind calculating a group probability of access to at least one of the multiple destination collection points.

The Examiner states that Sorokine discloses comparing a calculated group probability of access to a threshold value at col. 9, lines 31-49.

The cited text discloses comparing pilot strengths to a threshold.

Pilot strengths are not probabilities. Pilot strengths are not group probabilities. Pilot strengths are not group probabilities of access to at least one of the multiple

destination collection points.

Accordingly, Applicants respectfully submit that claim 12 is clearly patentable over Sorokine.

Claim 13

Among other things, the method of claim 13 includes utilizing a pseudo-random algorithm to distribute measurement data beyond optimal paths identified utilizing the communicated information related to the calculated probabilities of future access by a mobile device for each of the multiple node.

The Examiner cites col. 2, lines 35-41.

The cited text discloses pseudo-random offsets to pilot channel signals that are employed in CDMA systems.

The cited text clearly makes no mention of utilizing a pseudo-random algorithm to distribute measurement data beyond optimal paths identified utilizing the communicated information related to the calculated probabilities of future access by a mobile device for each of the multiple node.

Accordingly, Applicants respectfully submit that claim 13 is clearly patentable over Sorokine.

Claim 16

At the outset, it is noted that in two Office Actions and an Advisory Action now, the Examiner has avoided actually identifying any component in Sorokine's wireless communication system as even allegedly corresponding to the recited sensor device. If Sorokine's actually disclosed such a sensor device, such identification should be very easy to do, given that Sorokine's wireless communication system consists of only three types of components: mobile stations (MS), base stations (BS), and a base station controller (BSC).

In the Advisory Action, the Examiner now states that claim 16 recites that the "sensor net" comprises all of the various elements mentioned in the claim.

Applicants respectfully disagree. Applicants respectfully submit that it is plain by the grammatical structure of the claim, by standard claim practice, and by simple common sense that claim 16 recites **a sensor device** including all of the various means recited in the claim. The Examiner's "interpretation" of claim 16 would make

the claim improper as it would fail to include any limitations to the thing being claimed, and would not only violate the "single element rule" of claim drafting – but would actually have zero elements!

Claim 16 recites "*A sensor device for operation in a sensor net comprising: means for detecting . . .* ." Claim 25 recites "*A method of operating a sensor net comprising: detecting access attempts . . .* .:" So if the same process of "interpretation" which the Examiner apparently applied to claim 16 was also applied to claim 25, one would have to conclude that claim 25 is claiming that "*the sensor net comprises detecting access attempts*." Such an interpretation is clearly not reasonable – and neither is the "interpretation" of claim 16 set forth in the Advisory Action.

Meanwhile, among other things, the sensor device of claim 16 includes means for calculating a probability of future access by a mobile device to the sensor device utilizing recorded attempts to access measurement data by mobile devices; means for receiving information related to probabilities of future access associated with other sensor devices within the sensor net; and means for communicating information related to probabilities of future access to other sensor devices.

As explained above with respect to claim 1, Applicants respectfully submit that <u>Sorokine</u> does not disclose calculating a probability of future access by a mobile device to a sensor device utilizing recorded attempts to access measurement data by mobile devices. Thus, <u>Sorokine</u> also fails to disclose any sensor device that includes any means for calculating a probability of future access by a mobile device to the (very same) sensor device utilizing recorded attempts to access measurement data by mobile devices. For the record, it is also noted that in <u>Sorokine</u> the "likelihood" of a BS being a good candidate for soft switchover, which is mentioned in the cited col. 10, lines 58-62 is calculated by the BSC 31, and not by any sensor device.

Furthermore, Applicants respectfully submit that <u>Sorokine</u> very clearly does not disclose any such sensor device that also includes any means for receiving information related to probabilities of future access associated with other sensor devices within the sensor net. For the record, it is also noted that the cited text at col. 10, lines 58-62 does not mention any probabilities being received by any sensor

device of a sensor net – and even more particularly, not by any sensor device which **also** includes means for calculating a probability of future access by a mobile device to a sensor device utilizing recorded attempts to access measurement data by mobile devices, as recited above.

Additionally, Applicants respectfully submit that Sorokine very clearly does not disclose any such sensor device that also includes any means for communicating information related to probabilities of future access to other sensor devices.

Finally, as explained above with respect to claim 1, Sorokine very clearly does not disclose means for routing measurement data within a sensor net in response to any means for calculating a probability of future access and means for receiving information related to probabilities of future access associated with other sensor devices.

Accordingly, for at least these reasons, Applicants respectfully submit that claim 16 is clearly patentable over Sorokine.

Claims 17 and 19-24

Claims 17 and 19-24 depend from claim 16 and are deemed patentable for at least the reasons set forth above with respect to claim 16, and for the following additional reasons.

Claim 17

Among other things, the sensor device of claim 17 includes means for receiving probabilities of future access from a mobile device, wherein said means for routing further operates in response to said means for receiving probabilities from a mobile device.

The Examiner cites col. 7, lines 9-22.

The cited text discloses setpoint values based on E_B/N_O signal strengths required for successful communication.

Setpoint values are not probabilities. Setpoint values are not probabilities of future access.

Accordingly, Applicants respectfully submit that claim 17 is clearly patentable over Sorokine.

Claim 20

Among other things, in the sensor device of claim 20, the means for communicating selects the subset of sensor devices in relation to respective probabilities of access to said subset of sensor devices and a cost function.

The Examiner cites col. 8, lines 31-44.

The cited text discloses pseudo-random offsets to pilot channel signals in CDMA systems.

The cited text makes no mention of selecting any subset of sensor devices in relation to respective probabilities of access to said subset of sensor devices **and a cost function**.

Accordingly, Applicants respectfully submit that claim 20 is clearly patentable over Sorokine.

Claim 24

Among other things, the sensor device of claim 24 includes means for routing includes randomization logic for directing measurement data beyond optimal paths defined by probabilities of future access to other sensor devices.

The Examiner cites col. 2, lines 35-41.

The cited text discloses pseudo-random offsets to pilot channel signals that are employed in CDMA systems.

The cited text clearly makes no mention of utilizing randomization logic for directing measurement data beyond optimal paths defined by probabilities of future access to other sensor devices.

Accordingly, Applicants respectfully submit that claim 24 is clearly patentable over Sorokine.

Claim 25

Among other things, the method of claim 25 includes determining probabilities of future access by mobile devices to nodes of a sensor net.

As explained above with respect to claim 1, Applicants respectfully submit that a likelihood that a particular BS would be a good candidate for soft handoff by a MS is not a probability that a node will be accessed in the future by a mobile device. Applicants respectfully submit that Sorokine does not disclose determining

probabilities of future access by mobile devices to nodes of a sensor net.

Also as explained above with respect to claims 1 and 16, Sorokine does not disclose distributing information related to such determined probabilities through a sensor net. In that regard, it is again noted that set point values which are determined by a MS to meet a particular target frame error rate are not related to likelihood – calculated by a BSC 31 - that a neighboring BS will be a good candidate for a soft handoff from a particular serving BS.

Finally, as also explained above with respect to claim 1, Sorokine does not disclose routing any measurement data utilizing the distributed information related to the determined probabilities.

Accordingly, for at least these reasons, Applicants respectfully submit that claim 25 is clearly patentable over Sorokine.

Claim 27

Claim 27 depends from claim 25 and is deemed patentable for at least the reasons set forth above with respect to claim 25.

Also, among other things the method of claim 27 includes receiving information from a mobile device related to future access activity of mobile devices.

The Examiner cites col. 7, lines 9-22.

The cited text does not disclose that any mobile device communicates any information to any node related to future access activity of mobile devices.

The cited text clearly makes no mention of utilizing randomization logic for directing measurement data beyond optimal paths defined by probabilities of future access to other sensor devices.

Accordingly, Applicants respectfully submit that claim 27 is clearly patentable over Sorokine.

Claim 28

Claim 28 depends from claim 25 and is deemed patentable for at least the reasons set forth above with respect to claim 25.

(2) Claims 4, 5, 18 and 26 Are All Patentable Over Sorokine in view of Raith

Claims 4, 5, 18 and 26 all depend variously from claims 1, 16 and 25 and are

deemed patentable for at least the reasons set forth above with respect to claims 1, 16 and 25, and for the following additional reasons.

At the outset, Applicants respectfully traverse the proposed combination of Sorokine and Raith as lacking any articulated purpose or reason.

The text cited in Raith at col. 8, lines 55-61 merely state that a reason for initiating call handoff may be stored in memory, and one exemplary reason for a handoff would be to avoid barring new call attempts. That is all. Nothing in this text even remotely suggests that calculating a time window average of detected access attempts to a node of a sensor net; or correlating probabilities of access to a time of day, would somehow avoid barring new call attempts.

Furthermore, Applicants respectfully submit that claims 5, 18 and 26 are patentable over any combination of the references for at least the following additional reasons.

Claim 5

Among other things, the method of claim 5 includes calculating a respective probability of future access by a mobile device for each of the multiple nodes comprises calculating a time window average of detected access attempts

The Office Action fairly admits that Sorokine does not disclose this feature. Applicants respectfully submit that the cited text in Raith at col. 8, lines 55-61 does not disclose this feature.

Accordingly, Applicants respectfully submit that no combination of Sorokine and Raith would ever produce the method of claim 5 including this feature.

Claim 18

Among other things, in the sensor device of claim 18 probabilities of access are correlated to a time of day.

The Office Action fairly admits that Sorokine does not disclose this feature. Applicants respectfully submit that the cited text in Raith at col. 8, lines 55-61 does not disclose this feature.

Accordingly, Applicants respectfully submit that no combination of Sorokine and Raith would ever produce the sensor device of claim 18 including this feature.

Claim 26

Among other things, the method of claim 26 includes calculating time window averages of access attempts by mobile devices to respective nodes of said sensor net

The Office Action fairly admits that Sorokine does not disclose this feature. Applicants respectfully submit that the cited text in Raith at col. 8, lines 55-61 does not disclose this feature.

Accordingly, Applicants respectfully submit that no combination of Sorokine and Raith would ever produce the method of claim 26 including this feature.

CONCLUSION

For all of the foregoing reasons, Applicants respectfully request that all claim rejections be withdrawn, that claims 1-27 be allowed, and the application be passed to issue.

Respectfully submitted,

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CLAIMS APPENDIX

1. (Previously Presented) A method of operating a sensor net, comprising:

detecting access attempts by one or several mobile devices to multiple nodes within said sensor net;

calculating a respective probability of future access by a mobile device for each of said multiple nodes in response to said detecting;

communicating information related to said calculated probabilities through said sensor net; and

routing measurement data for collection to respective ones of said multiple nodes utilizing said calculated probabilities.

2. (Previously Presented) The method of claim 1 further comprising:

receiving probabilities of future access from a mobile device by least one node of said sensor net and communicating said received probabilities through said sensor net, wherein said routing further utilizes said received probabilities to route measurement data.

3. (Original) The method of claim 1 wherein said detecting, calculating, and communicating occur repetitively causing routing of measurement data to vary dynamically in response to changes in access patterns associated with mobile devices.

4. (Original) The method of claim 1 wherein said routing measurement data varies in response to the time of day when said routing is performed.

5. (Original) The method of claim 1 wherein said calculating calculates a time window average of detected access attempts.

6. (Previously Presented) The method of claim 1 wherein said communicating calculated probabilities comprises:

receiving a first portion of said information at a first node in said sensor net;

selecting a second portion from said first portion of information utilizing calculated probabilities of future access; and

transmitting said second portion from said first node to a second node in said sensor net.

7. (Previously Presented) The method of claim 6 wherein said selecting removes information from said first portion utilizing a cost function.

8. (Original) The method of claim 7 wherein said cost function calculates a path cost to a collection point.

9. (Original) The method of claim 8 wherein said cost function is a function of communication hops to a collection point.

10. (Previously Presented) The method of claim 1 wherein said routing comprises:

selecting a destination collection point utilizing said communicated information.

11. (Previously Presented) The method of claim 1 wherein said routing comprises:

selecting multiple destination collection points utilizing said communicated information.

12. (Original) The method of claim 11 wherein said selecting multiple destination collection points comprises:

calculating a group probability of access to at least one of said multiple destination collection points; and

comparing said calculated group probability of access to a threshold value.

13. (Previously Presented) The method of claim 1 wherein said routing

comprises:

utilizing a pseudo-random algorithm to distribute measurement data beyond optimal paths identified utilizing said communicated information.

14. (Original) The method of claim 1 wherein said communicating comprises:

communicating information that is indicative of a change in previously communicated information related to said probabilities of future access.

15. (Original) The method of claim 1 wherein said mobile devices are cellular devices.

16. (Previously Presented) A sensor device for operation in a sensor net comprising:

means for detecting and recording attempts to access measurement data by mobile devices;

means for calculating a probability of future access by a mobile device to said sensor device utilizing said recorded access attempts;

means for receiving information related to probabilities of future access associated with other sensor devices within said sensor net;

means for communicating information related to probabilities of future access to other sensor devices; and

means for routing measurement data within said sensor net in response to said means for calculating and said means for receiving.

17. (Original) The sensor device of claim 16, comprising:

means for receiving probabilities of future access from a mobile device, wherein said means for routing further operates in response to said means for receiving probabilities from a mobile device.

18. (Original) The sensor device of claim 16 wherein probabilities of access are correlated to a time of day.

19. (Previously Presented) The sensor device of claim 16 wherein said means of communicating information related to probabilities of future access to other sensor devices limits communication to information associated with a subset of sensor devices within said sensor net.

20. (Original) The sensor device of claim 19 wherein said means for communicating selects said subset of sensor devices in relation to respective probabilities of access to said subset of sensor devices and a cost function.

21. (Original) The sensor device of claim 16 wherein said means for routing employs source address routing to communicate measurement data originating at said sensor device.

22. (Previously Presented) The sensor device of claim 21 wherein said means for routing selects a plurality of collection points utilizing said source address routing.

23. (Original) The sensor device of claim 22 wherein said plurality of collection points are selected by determining a probability of access to at least one of said plurality of collection points.

24. (Original) The sensor device of claim 19 wherein said means for routing includes randomization logic for directing measurement data beyond optimal paths defined by probabilities of future access to other sensor devices.

25. (Previously Presented) A method of operating a sensor net comprising:

detecting access attempts by one or several mobile devices to multiple nodes within said sensor net;

determining probabilities of future access by said mobile devices to nodes of said sensor net;

distributing information related to said determined probabilities through said

sensor net; and

routing measurement data utilizing said distributed information related to said determined probabilities.

26. (Original) The method of claim 25 wherein said determining probabilities comprises:

calculating time window averages of access attempts by mobile devices to respective nodes of said sensor net.

27. (Original) The method of claim 25 wherein said determining comprises:

receiving information from a mobile device related to future access activity of mobile devices.

28. (Original) The method of claim 25 wherein said distributing information comprises:

receiving at a first node identification of a plurality of collection points;

selecting a subset of said plurality of collection points using a cost function related to communicating to the plurality of collection points; and

communicating information related to said determined probabilities limited to said subset to a second node.

EVIDENCE APPENDIX

{None}

RELATED PROCEEEDINGS APPENDIX

{None}